Microbial Food safety

by

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Food hygiene are the conditions and measures necessary to ensure the safety of food from production to consumption. Food can become contaminated at any point during slaughtering or harvesting, processing, storage, distribution, transportation and preparation. WHO
PRECAUTION

The smell, taste and appearance of food and water are not good indicators for determining whether they are safe! Just because something looks safe to eat does not mean that it is.

It takes over 2.5 billion bacteria or germs to make 250 ml of water look cloudy, but in some cases it only takes 15-20 bacteria to make one sick.
FOOD POISONING

Food poisoning is any illness that results from eating contaminated food.

Symptoms of food poisoning include:

- upset stomach,
- abdominal cramps and pain,
- nausea and vomiting,
- diarrhea,
- fever, and dehydration
- Blurred vision and headache

These symptoms may range from mild to severe.
COMMON CAUSATIVE AGENTS

The organisms that cause the most illnesses, hospitalizations, and deaths:

Implicated Foods

- **Salmonella** Eggs, poultry, meat, unpasteurized milk or juice, cheese, contaminated raw fruits and vegetables
- **Norovirus** Shellfish, ready-to-eat foods touched by infected food workers (salads, sandwiches, ice, cookies)
- **Campylobacter** Raw and undercooked poultry, unpasteurized milk, contaminated water
- **Toxoplasmosis** Meat that is raw or not well cooked
- **E. coli 0157:H7** undercooked ground beef, unpasteurized (raw) milk and juice, soft cheeses made from raw milk, and raw fruits and vegetables
- **S. aureus** Salads, such as ham, egg, tuna, chicken, potato, and macaroni, cream-filled pastries, cream pies, sandwiches, milk and dairy products

**C. botulinum** Honey, home-canned vegetables and meat with low acidity

**Bacillus anthracis** Meat from uninspected infected animal (beef)

**Aflatoxicosis** Maize and maize flour, nuts
CONSEQUENCES OF FOOD POISONING

Foodborne and waterborne diarrhoeal diseases kill an estimated 2.2 million people annually, most of whom are children in developing countries.

Diarrhoea is the acute, most common symptom of foodborne illness, but other serious consequences include:

- kidney and liver failure,
- brain and neural disorders,
- reactive arthritis,
- cancer and death.
ONSET OF FOOD POISONING SYMPTOMS

Food poisoning Symptoms may occur very quickly after eating the food, or may take days or even weeks to appear. For most foodborne illnesses, symptoms occur 6-48 hours after the food has been eaten.

- **S. aureus** poisoning 1-6 hrs
- Salmonellosis 6-48 hrs
- **E. coli** infection 1-3 days
- Shigellosis 4-7 days

This makes it difficult to investigate the suspected food.
FOOD SAFETY IN KENYA

Under reporting of food poisoning cases

- Reports only when there are fatal cases and when institutions are involved
  - Methanol poisoning
  - Aflatoxicosis

Recent Institutional food poisoning occurrences

- Strathmore University – Nairobi (24th March 2015)
- Mama Ngina Sec School – Nakuru (20th May 2015)

Unreported sporadic food poisoning cases
IS EATING OUT SAFE IN KENYA?
YES! It is SAFE!

If in doubt of either the food or premises – run

Remember “Ignorance is the curse of God; knowledge is the wing wherewith we fly to heaven”  William Shakespeare
THANK YOU

bon appétit